

New combinations in *Nordenstamia* (Compositae-Senecioneae) from Argentina, Bolivia, Peru and Ecuador

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Abstract

Fourteen new combinations are made in the genus *Nordenstamia* LUNDIN (Compositae-Senecioneae). The transfers are species from Argentina, Bolivia, Peru and southern Ecuador previously treated under *Senecio*, *Gynoxys* or *Aequatorium*.

Introduction

The new genus *Nordenstamia* LUNDIN has been recently established for a group of Andean shrubs and trees, based on *Gynoxys repanda* WEDD. (LUNDIN 2006). The new genus is allied to *Gynoxys* CASS. and *Aequatorium* B. NORD. The former genus is characterized by consistently opposite leaves, yellow-flowered capitula, much pointed style branches and a tomentum of simple hairs. *Aequatorium* (NORDENSTAM 1978) is distinct by the alternate leaves, white florets, obtuse disc-floret styles without a central pencil, and a double tomentum of stellate-peltate trichomes. *Nordenstamia* has (generally) alternate leaves and yellow-flowered capitula, and a somewhat pointed tip to the disc-floret styles. A number of species up to now placed in *Aequatorium*, *Gynoxys* or *Senecio* (in sect. or subgen. *Praegynoxys*), need to be transferred to *Nordenstamia*. Some taxa of *Nordenstamia* from Bolivia and Peru are still undescribed and will be treated in a forthcoming paper. The genus is an important constituent in the cloud forest vegetation especially on the Amazonian side of the Andes, and new taxa can be expected to be found in Bolivia and Peru. Field work in Peru in Dec. 2005 to Jan. 2006 yielded some interesting finds to be discussed in future papers. The generic position of the few opposite-leaved taxa (cf. BELTRÁN & ROBINSON 2005) is still uncertain and will be further investigated.

Material and methods

Herbarium material was made available to me from a number of herbaria (abbreviations in accordance with HOLMGREN & HOLMGREN 1998-), viz. mainly MO, NY, P, S, U, US and additional specimens from some other herbaria.

New combinations in *Nordenstamia*

Nordenstamia cajamarcensis (H. ROB. & CUATREC.) B. NORD., comb. nov.

Basionym: *Aequatorium cajamarcense* H. ROB. & CUATREC., Novon 2: 411 (1992).

Type: Peru. Cajamarca: Prov. Cutervo, Distrito San Andrés de Cutervo, Parque Nacional de Cutervo, caserío "Pajonal", camino hacia Jaén (Chorro blanco), 2600 m, 10.VIII.1987, DÍAZ & OSORES 2585 (US holo.; MO iso.).

Nordenstamia carpishensis (CUATREC.) B. NORD., comb. nov.

Basionym: *Gynoxys carpishensis* CUATREC., Brittonia 12: 185 (1960).

Synonym: *Aequatorium carpishense* (CUATREC.) H. ROB. & CUATREC., Novon 2: 412 (1992).

Type: Peru. Carpish, between Huánuco and Tingo María, 2800 m, 10.VII.1957, H. ELLENBERG 2211 (U holo.).

Nordenstamia fabrisii (CABRERA) B. NORD., comb. nov.

Basionym: *Gynoxys fabrisii* CABRERA, Bol. Soc. Argent. Bot. 15(4): 332 (1974).

Synonym: *Aequatorium fabrisii* (CABRERA) C. JEFFREY, Kew Bull. 47(1): 61 (1992).

Type: Argentina, Jujuy, Valle Grande, Río Jordán, FABRIS, CRISCI & PETRYIELLA in FABRIS 5717 (LP holo.; K iso.).

Nordenstamia huanucona (CUATREC.) B. NORD., comb. nov.

Basionym: *Senecio huanuconus* CUATREC., Fieldiana Bot. 27(2): 45 (1951).

Synonym: *Gynoxys huanucona* (CUATREC.) CUATREC., Brittonia 8: 158 (1955).

Type: Peru. Huanuco, 1927, M. SAWADA 45 (F holo.; US iso.).

Nordenstamia juninensis (H. ROB. & CUATREC.) B. NORD., comb. nov.

Basionym: *Aequatorium juninense* H. ROB. & CUATREC., Novon 2: 412 (1992).

Type: Peru. Junín: Carpapata, above Huacapistana, 2700-3200 m, 7.VI.1929, KILLIP & SMITH 24434 (US holo.).

Nordenstamia kingii (H. ROB. & CUATREC.) B. NORD., comb. nov.

Basionym: *Aequatorium kingii* H. ROB. & CUATREC., Novon 2: 412 (1992).

Type: Bolivia, Cochabamba: 15 km from Colomi on the road to Tunari, 10,600 ft., 7.II.1978, KING & BISHOP 7680 (US holo.; MO iso.).

N. kingii is a characteristic species, usually easily recognized by the long and rather stiff hairs on the branches and petioles, and the ovate and basally broadly cordate leaves. The short tomentum of branched hairs especially on the undersides of the leaves is variable, from dense and light grey to a looser brownish indumentum. It is a shrub or small tree to 3 m tall.

Further collections examined: Bolivia, Cochabamba: 26 km from Comarapa on road to Cochabamba, 8,500 ft., 5.II.1978, KING & BISHOP 7650 (MO!, US!); N of Monte Punku on road Cochabamba-Comarapa, 17°33.15'S, 65°16.70'W, 2850 m, STAHL 5582A (S!); Prov. Carrasco, 5 km al NE de Monte Punco por el camino a Sihuenca, 17°34'S, 65°15'W, 2700 m, 10.III.1988, SOLOMON & NEE 18067 (NY!, US!); Prov. Carrasco, 3,5 km E del pueblo de Siberia, 17°50'S, 64°44'W, 2950 m, 5.III.1988, MARIO SALDIAS 279 (NY!); Santa Cruz: Prov. Caballero, Loc. Torresillas-Trayecto entre Estancia Las Abras y Laguna Brava, 17°48'S, 64°37'W, 2500-3000 m, 8-9.V.1992, VARGAS & PRADO 1316 (NY!); Prov. Caballero, Parque Nacional Amboro, Laguna Brava y Cerro Ponguillo entrando por "la Jarra" desde la vicinidat de Torredillas, 17°47'37"S, 64°36'38"W, 3100 m, 4.IV.1996, JARDIM, VARGAS, NAVARRO & BARRA 2700 NY!); Prov. Caballero, Parque Nacional Amboro, 25 km al N de San Juan del Potrero, 17°52'36.1"S, 64°21'55.5"W, 2630 m, 10.IV.1996, JARDIM, NAVARRO, VARGAS & BARRA 2881 (NY!).

A deviating collection from Chuquisaca (Prov. Sud Cinti, Cerro Bufete, cumbre de la parte tabular en el lado nororiental, 20°50'S, 64°22'W, 2250-2300 m, 19.V.1995, ARROYO, SERRANO & HOLST 954, NY!, USZ) differs in leaf-shape and tomentum, but since it is devoid of flowering capitula, the determination is uncertain.

***Nordenstamia limonensis* (B. NORD.) B. NORD., comb. nov.**

Basionym: *Aequatorium limonense* B. NORD., Comp. Newsl. 31: 14 (1997).
Type: Ecuador, Morona-Santiago: 49 km from Limón on road to Gualaceo, 2,300 m, 16.VIII.1996, STAHL & KNUDSEN 2882 (S! holo.).

- Obs. The relationship to *Gynoxys azuayensis* CUATREC., which may be conspecific, needs further investigation. In fact, all three opposite-leaved species of *Aequatorium* (ROBINSON & BELTRÁN 2005) are only provisionally placed in *Nordenstamia*.

***Nordenstamia longistyla* (GREENM. & CUATREC.) B. NORD., comb. nov.**

Basionym: *Senecio longistylus* GREENM. & CUATREC., Collect. Bot., Barcinone, 3: 292 (1953).

Synonym: *Gynoxys longistyla* (GREENM. & CUATREC.) CUATREC., Brittonia 8: 158 (1955).

Type: Peru, Prov. Moquegua, Saylapa, near Carumas, 3600-3700 m, A. WEBERBAUER 7331A (F holo.).

***Nordenstamia pascoensis* (H. BELTRÁN & H. ROB.) B. NORD., comb. nov.**

Basionym: *Aequatorium pascoense* H. BELTRÁN & H. ROB., Comp. Newsl. 42: 5 (2005).
 Type: Peru, Dpto. Pasco, Prov. Oxapampa, rail to summit of Cordillera Yanachaga, via Río San Daniel, 2600 m, 18.VII.1984, D. N. SMITH & H. BOTIGER 7884 (USM holo.; AMAZ, MO, US iso.).

***Nordenstamia rimachiana* (CUATREC.) B. NORD., comb. nov.**

Basionym: *Gynoxys rimachiana* CUATREC., Phytologia 52: 164 (1982).
 Synonym: *Aequatorium rimachianum* (CUATREC.) H. ROB. & CUATREC., Novon 2: 413 (1992).
 Type: Peru, Huánuco, Dpto. Chincho, highway Tingo Maria-Huánuco, El Mirador near Carpish, 2600-2700 m, 21.III.1980, M. RIMACHI 4908 (US holo.; F iso.).

***Nordenstamia stellatopilosa* (GREENM. & CUATREC.) B. NORD., comb. nov.**

Basionym: *Senecio stellatopilosus* GREENM. & CUATREC., Collect. Bot., Barcinone, 3: 264 (1953).
 Synonym: *Aequatorium stellatopilosum* (GREENM. & CUATREC.) C. JEFFREY, Kew Bull. 47: 62 (1992).
 Type: Peru, Villcabamba, Río Chinchao, MACBRIDE 4946 (F holo.).

***Nordenstamia tovarii* (H. ROB. & CUATREC.) B. NORD., comb. nov.**

Basionym: *Aequatorium tovarii* H. ROB. & CUATREC., Novon 2: 413 (1992).
 Type: Peru. Huancavelica: Prov. Tayacaja, Arriba de Marcavalle, entre Huachocolpa y Tintay, 3300 m, 21.IV.1964, TOVAR 4781 (US holo.).

***Nordenstamia tuestae* (CUATREC.) B. NORD., comb. nov.**

Basionym: *Senecio tuestae* CUATREC., Fieldiana Bot. 27(2): 46 (1951).
 Synonym: *Aequatorium tuestae* (CUATREC.) H. ROB. & CUATREC., Novon 2: 413 (1992).
 Type: Peru. Dep. Huanuco, Pillao, 2700 m, D. TUESTA DÍAZ & WOYTKOWSKI 34095 (F holo.)

***Nordenstamia woytkowskii* (CUATREC.) B. NORD., comb. nov.**

Basionym: *Senecio woytkowskii* CUATREC., Fieldiana Bot. 27(2): 49 (1951).
 Synonym: *Gynoxys woytkowskii* (CUATREC.) CUATREC., Brittonia 8: 158 (1955).
 Type: Peru. Huanuco, vic. of Tambo de Vacas, 3500 m, 4.XI.1937, WOYTKOWSKI 145 (F holo.)

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